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WESTERN UNIVERSITY OF PENNSYLVANIA,
ALLEGHENY, PA.

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COLLEGIATE DEPARTMENT,

COURSES OF STUDY,

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General Statement.

The Collegiate Department of the Western University, comprising the Classical, Scientific and Latin-scientific courses, aims to afford its students the liberal education and training that will best fit them for whatever vocation they may choose.

A thorough college course is to-day recognized as particularly essential for those who shall successfully pursue the professions of theology, law, medicine, journalism and teaching.

The success of the graduates of our Collegiate Department in their various professions testifies to the value of such training.

During the latter half of his course, the student may to some extent specialize in the line of his future profession.

Information in regard to the Chemical Section, a branch of the Scientific course, may be found in the University catalogue.

Entrance Requirements.

Candidates for admission to the Freshman Class must be at least fifteen years of age, and must pass satisfactory written examinations in the subjects required, as they are specified in the catalogue.

Examinations for admission to the Collegiate and Engineering Departments are held on the two days following Commencement, and on the two days preceding the opening of the first term.

Students from accredited high schools and academies are admitted without examination, upon presenting certificates, signed by the principal of the school, showing that they have successfully completed the requirements.

Co-Education.

Since 1895 women have been admitted to the institution, and their increasing number shows that they appreciate the opportunities offered.

Quite a number of young women, who have recently graduated from the college, are now occupying important positions in high schools in this vicinity.

COURSES OF STUDY.

Psychology.

This subject is presented in such a way that the average undergraduate is able to attain a thorough understanding of its principles, and a good theoretical knowledge of this important branch of philosophy.

A brief course is also given in Experimental Psychology.

In connection with Plato, a study is made of the History of Ancient Philosophy, from Thales to Cicero.

Ethics.

The subject is developed in a natural and orderly way.

Illustrations are given that illustrate, and that are easily understood.

Students never fail to become interested ; and feel, when they have completed the course, that they have a good foundation for special work in both Theoretical and Practical Ethics. The text-book used is that of the professor in charge.

Evidences of Christianity.

In the treatment of this subject, the arguments for the genuineness and credibility of the Gospel narratives, and the reasonableness and reality of Christianity are so presented as to give a cumulative force that is very convincing.

We have gratifying testimony from several theological seminaries that our graduates come to their work well prepared in philosophy and linguistic studies.

Logic.

Such a study of both Inductive and Deductive Logic is made in the Junior year as will enable the student to reason more clearly himself, and to more easily detect fallacies in the reasoning of others.

In the Senior year the student is encouraged to make practical use of what he has learned of this important study.

HISTORY AND POLITICAL SCIENCE.

Political Economy.

Political Economy is taught as a science, and a thorough understanding of its principles is required.

Students are taught to make practical application of principles; and they have pointed out to them the relation of Political Economy as a Science, and Political Economy as an Art.

International Law.

Special attention is given to the history of the development of International Law, and to the application of its principles to the international problems that are now before nations for their solution.

History.

The work is begun by a general survey of the history of the Ancient Oriental Monarchies, Greece, Rome, and of the Mediæval and Modern periods.

POLITICAL HISTORY.—The object of this course is to give a general view of the evolution of political ideas among civilized peoples. This is done by text-books and lectures.

A general survey of Europe is first made.

This is followed by a study of the development and growth of political ideas and parliamentary government in France, from 1814 to the present time.

The latter part of the course is taken up with the origin, growth and trend of political parties in the United States, from the establishment of the republic up to the present time.

THE CONSTITUTION OF THE UNITED STATES.—The Constitution is carefully studied, and constitutional questions which come up from day to day, are discussed in the class room.

The English Language and Literature.

The inductive method in teaching Rhetoric has been used with gratifying success, and will be continued.

Effort is made to stimulate the inventive faculty of the student, and to help him in acquiring a good style.

Public speaking and debate are a part of the required course.

A text-book on the history of the English language is studied.

A systematic study is made of English and American literature, accompanied by a critical examination of the works of the leading writers in prose and poetry.

A special course of lectures will be given on the development of the English novel.

The work in English is continuous throughout the four years of the college course.

The Greek Language and Literature.

The aim of this department is to cultivate accurate scholarship, and to broaden and sharpen the mind by means of a thorough and systematic study of some of the masterpieces of Greek literature.

The influence of Greece upon much of the best work of modern times in art, literature and philosophy, is impressed upon the student in all of his Hellenic studies.

The following is a general outline of the required and elective work in this department.

In connection with the work of the Freshman year, a careful review is made of the grammar and syntax of the language, and practice in Greek composition, in oral and in written exercises, is required.

EPIC POETRY.—Selected books of the *Iliad* and *Odyssey*; a careful study of Homeric forms, syntax and scansion, and a review of the Homeric Question. Text-book, Jebb's *Introduction to Homer*.

THE DRAMA.—A play of *Æschylus*, *Sophocles* and *Euripides*. The *Clouds* of *Aristophanes*. Lectures on the Greek drama. Text-book, *Gow's Companion to the School Classics*.

GREEK HISTORY.—*Xenophon's Hellenica*: Books I. and II., or *Herodotus*, Book VII. *Thucydides*: The *Sicilian Expedition*.

THE ATTIC ORATORS.—Several orations of *Lysias* are read, and Greek oratory is studied in both its literary and political aspects. *Demosthenes*, *On the Crown*, or selections from his briefer orations. Selections from the *Attic Orators*, using *Jebb's book*. Lectures on the *Attic Orators*. Occasionally one of the minor works of *Xenophon* or *Lucian* is read.

PLATO.—The *Apology* and *Crito*. The *Phaedo*, *Protagoras* and *Charmides* have been read in class. A brief course in the history of Ancient Philosophy. A class this year has been reading New Testament Greek.

The Latin Language and Literature.

Latin is taught both for the mental discipline obtained by the study of the language, and for the sake of the culture and knowledge acquired by an acquaintance with the literature and civilization of ancient Rome. The needs of those who may teach this language are not overlooked. The work may be summed up as follows:

LIVY AND CICERO.—Livy, *History of Rome*, Lib. XXI.-XXII. will be read. Attention will be given to the grammar, syntax and style of the author, and to the historical and geographical problems in connection with the text.

Latin grammar is reviewed.

Cicero, *De Senectute* and *De Amicitia*. In these charming essays the student is perhaps for the first time introduced to the subject of moral philosophy.

HORACE AND TACITUS.—Selections from the *Odes*, *Satires*, and *Epistles* of Horace. The life and times of the authors are studied. The student is taught to appreciate the exquisite literary art of Horace. The *Agricola* and *Germania* of Tacitus. In the spring of 1902 portions of the *Annals* were read, and the history of the empire under Tiberius and Nero was studied.

ROMAN LAW.—Morey's *Outlines of Roman Law*; Justinian, *Institutiones*: Lib. I.-IV.

THE ROMAN DRAMA.—Plautus: *Captivi*; Terence: *Andria*.

ROMAN RHETORIC. --Quintilian: Institutiones; Lib. X.

PHILOSOPHY AMONG THE ROMANS.—Lucretius: De Rerum Natura; Lib. V.; Cicero: De Finibus.

LECTURES ON PALÆOGRAPHY.

Students desiring to make a specialty of Greek and Latin with a view to teaching, will be advised as to a course of private reading in methods of teaching, and in the history of the classical languages.

The German Language and Literature.

The method of instruction aims to give the student a practical mastery of the language for conversational use, and to enable him to read with facility literary and scientific works in the German language.

ELEMENTARY GERMAN.—Grammar; composition; conversation; selected reading of prose and lyrics.

A course in SCIENTIFIC GERMAN is offered, thus enabling the student to turn his knowledge to practical account in whatever branch of science he may desire to work.

HEINE.—Harzreise; ballads and lyrics. Study of the life and times of Heine.

SCHILLER.—Wilhelm Tell; Die Jungfrau von Orleans; Wallenstein, Parts I. II. III.. Assigned readings on topics connected with the life and works of Schiller.

GOETHE.—Herman and Dorothea; lyrics; Faust, Parts I. and II.

LESSING.—Minna von Barnhelm; Nathan der Weise; Emilia Galotti.

The French Language and Literature.

The study of French is begun in the Freshman year, and may be continued throughout the entire course. French is the language of the class room.

BEGINNERS COURSE.—The work consists of a thorough drill in the grammar, writing of exercises, reading of prose selections, and conversation.

MODERN FRENCH PROSE.—Selections from the works of the great French novelists, such as Balzac, George Sand, Victor Hugo, Daudet, Pierre Loti, Edmond About, Beaumarchais.

HISTORY OF FRENCH LITERATURE.—Lectures, and references to standard hand-books. Reports from members of the class.

Mathematics.

The principal topics to which attention is directed are given in the following synopsis:

ALGEBRA.—Quadratic equations; development of functions; theory of logarithms; theory of equations; method of solving higher equations.

GEOMETRY.—Solid, with numerous examples.

PLANE TRIGONOMETRY.—Functions of angles; right and oblique triangles and applications.

SPHERICAL TRIGONOMETRY.—Special methods, as Napier's rules and analogies; Grauss' equations; application to navigation.

SURVEYING.—Methods employed; field work with notes; computations with plot; obstacles to measurement and alignment; laying out and dividing land. Text, Carhart's Plane Surveying.

ANALYTICAL GEOMETRY.—Right lines ; conic sections and curves of higher degree; transformation from rectilinear to polar co-ordinates and *vice versa*. Text, Nichols'.

CALCULUS.—Differential and Integral. Text, Hardy's.

NOTE.—Field Work in Surveying, and Calculus are not required of students of the Classical and Latin scientific courses.

Astronomy.

A course in Descriptive Astronomy is required of Seniors. Besides the work in the class-room they visit the Observatory, and receive from the director and his assistant information in regard to the construction and use of the transit, equatorial, sidereal and mean time clocks, chronometer, chronograph, etc., belonging to the Observatory.

Physics.

The study of this science is introduced by an elementary course in physics for the purpose of laying the foundation in essential facts.

This course is largely experimental, lecture demonstrations taking up a considerable part of the time.

After the student has become more proficient in mathematics, and is thus able to make use of mathematical aids, much greater attention is given to the theory.

The topics of the remainder of the course are : Sound, Light, Heat and Electricity.

Laboratory work is obligatory through the Junior and Senior years, for the Scientific students ; for the Classical students it is one of the electives for the Senior year.

Chemistry

GENERAL INORGANIC CHEMISTRY. The following is an outline of the course : General properties of matter ; chemical affinity ; nomenclature ; chemistry of non-metallic elements ; chemistry of metals.

The modes of occurrence and methods of manufacture are discussed. The remainder of the work is carried on in the laboratory, using Fresenius' Qualitative Analysis as a guide.

ORGANIC CHEMISTRY.—The study of Organic Chemistry can be carried on by those students who have finished the course in General Chemistry as described above. This course consists of lectures, and the preparation of organic compounds.

The training in Organic Chemistry is particularly valuable to those desiring to study medicine.

For information regarding the special Chemical Section, see the University catalogue.

Mineralogy.

The following is an outline of the course in this subject : Crystallography, with practice in determining crystals ; physical properties of minerals ; Descriptive Mineralogy, with laboratory work ; practice in determination of mineral species, and examination of rocks.

Biological Sciences.

INVERTEBRATE ZOOLOGY.—This work consists of lectures, laboratory practice and field work. Type forms of the invertebrates are studied in the laboratory, special attention being given to their comparative anatomy, life histories and the physiological functions of parts. Students will be

required to collect material for study, in this manner gaining a knowledge of the distribution of the invertebrate forms. Instruction is given in the use and care of the compound microscope and dissecting set. Text-books : Parker and Haswell's Zoology ; Bumpus' Invertebrate Zoology.

VETERBRATE ZOOLOGY. This work is conducted on very much the same lines as the Invertebrate Zoology. Animals are studied with special reference to the natural conditions under which they live. Particular attention is given to the study of type forms; and, by means of dissections and sketch work students are enabled to determine the relationships and anatomical differences which exist among the different groups of vertebrates.

During the course of the work some one vertebrate is studied in detail, attention being given to the histology. This year the fresh water perch was chosen, and during the coming season the common frog will very likely be selected for detailed study.

Text-books : Parker and Haswell's Zoology ; Orton's Comparative Zoology ; Packards' Zoology.

HUMAN ANATOMY AND PHYSIOLOGY.—The aim of this course is to convey a good knowledge of the nature and the functions of the various organs of the body, with special reference to Hygiene. While this is largely a lecture course, it is supplemented by the use of the microscope in determining the nature of the histological elements.

Text-books : Martin's Human Body, advanced course; Draper's Anatomy and Physiology.

Botany.

BOTANY.—The natural method is employed, the text-book serving as a guide. The following is a brief outline of the subjects studied : The cell; study of a pattern plant; development of the plant; morphology of the root, stem and leaves; adaptations.

In performing the above work the student employs the greater part of his time in the laboratory, where specimens are dissected and sketches made of the various structures. The work is continued by the study of familiar plant types, special attention being given to plant morphology, physiology and ecology. Frequent trips will be taken to local points of interest, in order to study different plant societies and collect material for dissection in the laboratory. Later on the work consists in the study of classification and nomenclature, and the preparation of herbaria.

Text-books: Leavett's Outline of Botany; Gray's Lessons and Manual of Botany; Arthur, Barnes and Coulter's Plant Dissection.

Special Work in Biology.

Those students who have completed the regular course in Zoology will receive every encouragement to pursue work along special lines, such as, study of the reproduction of selected protozoan types; microscopic methods, including fixing, hardening, staining and sectioning tissues; special study of insects; etc.

Students desiring to conduct special work in the study of plants can elect one of the following subjects: Practical examination of the cryptogams; general vegetable histology; botanical microtechnique. Other subjects may be selected according to the individual needs of the student.

BACTERIOLOGY.—The work in Bacteriology is intended especially for students who wish to gain a practical knowledge of the subject. Lectures will be given upon the principles of Bacteriology, accompanied by practical work in preparing cultures; isolation of species; determination of the cultural and morphological characteristics of the more common species.

Text-books: Abbott's Principles of Bacteriology; Balls' Essentials of Bacteriology.

Geology.

The course in Geology embraces so much of the subject as is contained in Scott's Introduction, with which the students are expected to become thoroughly familiar. The Library of the University contains nearly full sets of the publications of the National and the Pennsylvania surveys, together with many other works on the science which are used as books of reference.

Instruction is given largely by lecture, with frequent use of specimens, which are placed in the hands of the students for study and the attainment of practical familiarity with the principal lithological species; and a beginning is being made in the formation of a cabinet of fossils, which will serve as a useful introduction to the large subject of Palaeontology.

Excursions to points of geological interest in the neighborhood of the University are taken as often as practicable, in the belief that actual field work must form an important factor in a thorough grounding in the knowledge of nature.

Libraries.

The University Library consists of some 8,000 volumes. The endowment of the Richard Edwards, Jr., Memorial Fund by Mrs. George B. Edwards provides an annual revenue for the purchase of new books.

The Reading Room adjoins the Library, and is well supplied with the leading journals and periodicals.

The Carnegie Library of Allegheny, and the great Carnegie Library of Pittsburgh, are most helpful to the students in carrying on their work.

Access may be secured, upon proper application, for purposes of reference, to the extensive library of the Western Theological Seminary, in Allegheny.



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Scholarships and Prizes.

A number of scholarships are open to the students. Information in regard to the scholarships and prizes will be found in the University catalogue.

Gymnasium.

The Gymnasium is large and well adapted to the purposes intended. It is provided with a complete set of apparatus and with bath-rooms and lockers. A trained instructor is in constant attendance.

Grounds for athletic exercises are provided on the campus, with ball field, tennis courts and all necessary appliances. During recent years attention has been paid by many of the students to the art of fencing. Track athletics and field sports flourish in their success. Attendance for gymnasium work at regular hours is compulsory for the Freshman and Sophomore classes.

For further information in regard to the above departments, and concerning the Engineering Departments of the University, write to

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